ORDER SCHEDULING SYSTEM AND METHODOLOGY

ABSTRACT OF THE DISCLOSURE

An order scheduling system providing a method for distributing product orders to multiple fulfillers is described. This method, which solves the common business problem of

5   scheduling order shipments, is optimal because it minimizes the number of orders across fulfillers, thus minimizing shipping costs. It is also fair because orders are distributed equally across fulfillers if that fulfiller has the product available. To schedule orders, a data structure is defined whose rows are represented by a hash table of Fulfillers (HF), where each column is a hash table of Products (HP) and where each index of HP is itself a bit vector

10 (VP$_i$). This gives a three-dimensional data structure. The method operates by performing bitwise ANDing (&) operations of the bit vectors, to generate an Order bit vector representing the optimized fulfillment (per system configuration/constraints) for a particular received order.